



# Caves and Karst

A *Views of the National Parks* knowledge center



A famous French speleologist, Norbert Casteret, described going into a cave as leaving the world he knew—of bird songs and blue skies—for a mysterious world of blackness filling him with mystical enthusiasm. Exploring caves is exciting for many reasons, but perhaps primarily for the discovery of their splendid features. Caves also are repositories for mineral resources, archaeological artifacts, paleontological remains, environmental history, and biomedical data. Moreover, cave and karst systems store the overwhelming majority of our nation's freshwater resources as groundwater, and the protection and management of these vital water reservoirs are critical to public health and to sustainable economic development.

Human entry and use of caves can have significant detrimental effects. Biological resources that are threatened include, but are not limited to, several species of endangered bats, ferns, and lichens. Especially vulnerable are cave-adapted invertebrates about which very little is known. Because cave and karst systems are

intimately tied to local and regional hydrological systems, pollution or disruption of these natural systems can harm water supplies and water quality.

We encourage you to enter and explore the fascinating world of caves and karst, but do as cavers do, and "cave softly."

## Features

This knowledge center enables you to descend into the eerie, lovely world of caves and karst. It serves as an introduction to caves and karst in national parks and is meant to address any fears and misconceptions about these underground resources. Text and vivid imagery in this virtual classroom enhance your understanding of these other-worldly places.

### • Introduction

Provides basic information about caves and karst systems and locations, highlights some of the 23 different types of caves, and discusses the formation of various types of caves and karst. It also describes what being in a cave is like by addressing darkness, silence, temperature, relative

Explore the incredible underground world of caves and karst. Discover speleothems, cave formations, like the ones in the picture above, and learn what it takes to be a caver. (Photo by Ron Kerbo)

---

*The disk of light from my helmet lamp sweeps across the walls of the tunnel as I turn my head. The surface is white, glittering with gypsum crystals. ... The air smells clean and wet, like fresh laundry, and the silence is absolute.*

— Tim Cahill  
The National Geographic Society  
“Charting the Splendors of Lechuguilla Cave” (1991)

You can explore the underground environment and begin to envision the inside of a cave. What you discover is up to you.

## Caves and Karst

Introduction Importance Underground Threats Exploration National Parks Challenge

### Inside a Cave

A famous French speleologist, Norbert Casteret, described going into a cave as leaving the world he knew—of bird songs and blue skies—for a mysterious world of blackness filling him with mystical enthusiasm.

Will you see a mystical place when you enter a cave? Or a smelly dirty guano filled hole infested with bats? What you see in a cave is up to you.

Select a topic to find out more about cave environments.

Darkness



Silence



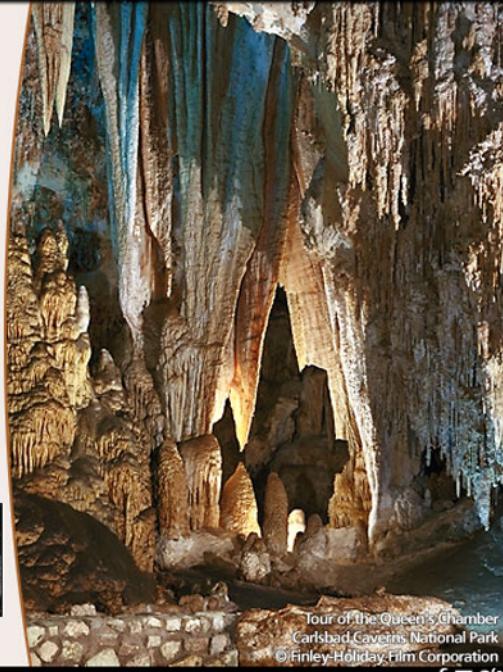
Temperature



Relative Humidity



Air Currents



Tour of the Queen's Chamber  
Carlsbad Caverns National Park  
© Finley-Holiday Film Corporation

a b c T

humidity, and air currents.

- **Why are caves and karst important?**

Describes the rich resources that caves and karst provide: water, minerals, archaeological artifacts, and paleontological remains. It also discusses the human uses of caves for commerce, tourism, and recreation, and their function as habitat for various forms of cave life. In addition, this section highlights caves as natural laboratories for research, as part of the global carbon cycle, and as databases of environmental change.

- **What and who are in caves?**

Invites you to use your imagination as this section describes bizarre and delicate cave formations, called speleothems. It also describes cave life -forms: cave visitors or temporary residents (e.g., bats and pack rats), cave lovers (e.g., some crayfish and salamanders), permanent residents of the dark zone (e.g., blind cave fish and cave shrimp), and microorganisms. People who go into caves (e.g., cavers, speleologists, and cave divers) are highlighted, along with other features like cave art.

- **Threats to caves and karst**

Highlights environmental concerns regarding caves, such as inappropriate construction, excessive contamination, and loss or destruction of cave resources. It also discusses engineering concerns in developed karstic and cave areas.

- **Exploring caves**

Provides basic safety advice regarding caving and highlights the importance of "caving softly." It suggests ways you might

start exploring caves.

- **National parks with caves and karst**

Caves and karstic features occur in 120 National Park System units, and more than 3,900 caves are currently known throughout America's national parks. This section provides case studies for some national parks and monuments with caves and karst and furnishes Web addresses for additional information about these national parks.

## Partners

This knowledge center was developed with the help of the Geologic Resources Division (GRD) of the National Park Service. The Natural Resource Program Center - Office of Education and Outreach and GRD would like to express special thanks to Katie KellerLynn for her dedication to working on this project.

## Contact us

Geologic Resources Division

Ron Kerbo - Cave Specialist

ron\_kerbo@nps.gov

(303) 969 - 2097

## Views Project

Bruce Nash - Project Manager

bruce\_nash@nps.gov

(303) 987 - 6697

*Fifty miles of caverns plunge and snake and twist away from me in every direction, passages of impenetrable darkness, like damp black velvet pressing against my face.*

— Tim Cahill

The National Geographic Society  
“Charting the Splendors of Lechuguilla Cave” (1991)

Visit Geologic Resources Division online:  
[www2.nature.nps.gov/geology](http://www2.nature.nps.gov/geology)